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WITH THE CORN BORER

Issued in the interest of corn-borer control conducted by the United States Department of Agriculture in cooperation with the State departments of agriculture and State agricultural colleges in New York, Pennsylvania, Ohio, Michigan, and Indiana.

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PURNELL CORN-BORER BILL

The House Committee on Agriculture on April 2 voted a favorable report on the Purnell Bill (H.R. 12632) which authorizes another special appropriation for a large scale clean-up campaign to retard the spread of the European corn borer.

The measure as approved by the committee carries an authorization for $7,000,000 as against $10,000,000 provided in the original bill. The money under the terms of the bill will be spent in the following ratio: For machinery, if required "by reason of an emergency," not to exceed 1 per cent; for overhead, not to exceed 9 per cent; and for expenditures for any necessary farm clean-up incidental to control which in the judgment of the Secretary of Agriculture are additional to those normal and usual in farm operations in the infested States, not to exceed 90 per cent.

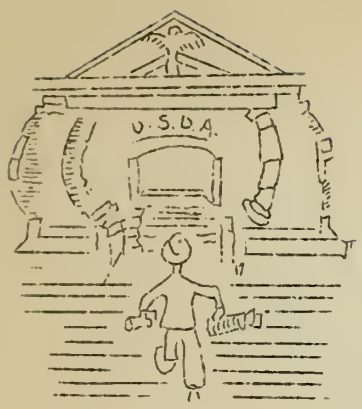
STATEMENT ON THE BILL

The bill as approved by the committee contemplates the following program for corn-borer control as outlined in a statement agreed upon by those interested in the bill and read by Congressman Purnell at the close of the hearings of the committee last week.

The purpose of the Purnell bill is to retard as much as possible, spread of the corn borer. The plan contemplates compensating the farmer within such area or areas as shall be determined by the Secretary of Agriculture as necessary to retard such spread, for extra labor necessary in the clean-up of the cornfields and for the State and Federal forces to clean up areas which the farmers fail to handle. It is clearly understood that such a clean-up to retard spread would begin at the thinly infested border and would extend as far back into the more heavily infested area as the money would permit.

The Purnell bill would provide for a thorough clean-up during the fall of 1928 and season of 1929 beginning with the thinly infested border area and would permit an early announcement of regulations covering the infested area and protect the interests of the farmers in the area. It includes a provision for a clean-up in the fall months. At that season some of the most effective work can be done in properly harvesting the crop, cleaning lands subject to flood, and preparing lands for wheat and other crops.

Address communications to Information Division, Corn-Borer Control, Extension Service, United States Department of Agriculture, Washington, D. C.



EXTENSION CONFERENCES

That extension forces must continue to emphasize the problem of growing corn profitably under corn borer conditions, carrying to the farmer the latest and best methods of doing this, was the opinion of extension leaders from the five corn borer infested States meeting in Washington, April 2 and 3. The attitude of the conference toward continued corn borer work was summarized by Dr. C. B. Smith at the close of the conference as follows:

"The corn borer menace is as great today as it ever was---- There should be no let-up in effort this spring or this fall or next spring in corn borer control. It is a part of good farming. It is peculiarly our task - an Extension task. We have had a year's experience. We are better prepared than ever for the task."

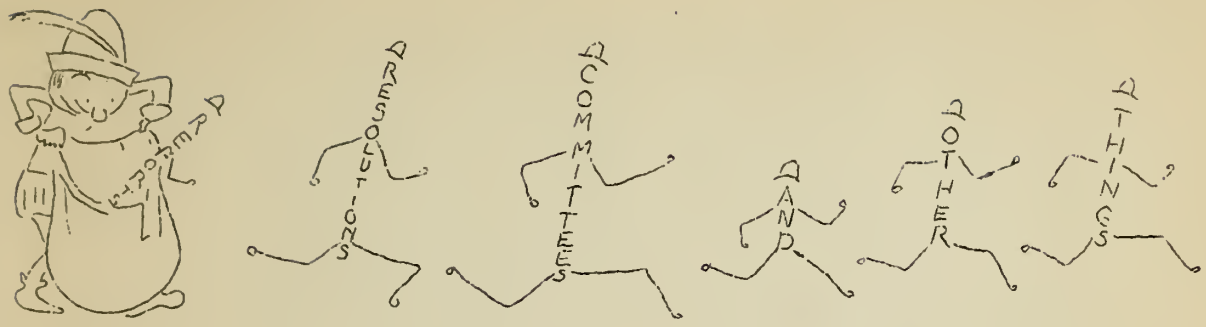
OHIO reported the fine record of meetings, exhibits, demonstrations and other educational activities given in "With the Corn Borer" last week. Most of the extension work in Ohio was carried on in a belt across the central part of the State, in the lightly infested area. For the future, Ohio plans to include corn borer control work in an all year program of better corn growing.

MICHIGAN reported an active and successful educational campaign which because of lack of space will be reserved for next week's issue. Public sentiment backs up the enforced clean-up in Michigan according to H. C. Rather, extension leader in corn borer work in Michigan. A program of more and better corn in Michigan will be undertaken.

INDIANA after a summary of the many educational activities carried on successfully during the fall and winter, expressed the determination to go ahead with the educational work during the spring regardless of what area was included in the enforced clean-up. A need for a long time program of profitable corn growing under corn borer conditions was expressed by the representatives from Indiana.

PENNSYLVANIA is stressing better farm practices under corn borer conditions in its educational work. Most of the work has been done in the counties with the heaviest infestation. The farmers in the 44 counties now infested are in the frame of mind to practice better farming for corn borer control. After July 1, it is planned to bring again to the farmers control methods which should be practiced at the time of harvesting.

NEW YORK is concentrating on an intensive spring educational campaign in the heavily infested area. The regulatory work is being done at the request of the farmers in parts of four counties and is receiving fine cooperation from the farmers. The county corn borer committee of representative farmers is proving valuable in the work here.



Three committees were appointed to report on the problems before the conference - one on the proposed educational program, under the chairmanship of G. E. Farrell, U. S. Department of Agriculture; one on methods, under the chairmanship of R. H. Wheeler of New York; and one on the informational program, under the chairmanship of Reuben Brigham, U. S. Department of Agriculture.

PROGRAM The committee on the proposed educational program reported, in part, as follows:

"Special attention should be given to the sweet-corn crop to reduce commercial damage threatening the market-garden and canning business.

"Special emphasis should be placed on the problem of producing corn at a profit under corn-borer conditions.

"Demonstrations or trials should be stimulated to determine the effectiveness of late planting and of the value of fertilizer in hastening maturity and in the production of a satisfactory yield.

"It is believed that productive varieties of field corn which mature with safety should receive special attention.

"Demonstrations should be conducted to show the yield and cost of producing oats where the ground is plowed before seeding, in comparison with ground disked or otherwise prepared.

"Although a large number of demonstrations were conducted in 1927 on methods of disposing of cornstalks, it is believed that there is a demand for additional demonstrations in the effectiveness of simple equipment that may be purchased at a small cost or assembled on the farm."

Activities Recommended.

1. The multiple horse hitch.
2. Plowing contests.
3. Low-cutting demonstrations.
4. Plowing demonstrations.
5. Stalk-shaver demonstrations.
6. Tours to the heavily infested area.
7. Exhibits - window displays.

METHODS

This committee made recommendations on the methods which have been used in the work up to the present time by the various States. Anticipating intensive work during the next year, the committee submitted the following suggestions:

1. Bring together the educational representatives from the counties affected, together with representatives of interested state-wide organizations to plan and to organize a State program of work.
2. These county representatives will go back to their communities, call together a representative group of the county, at least one from each township, and with help from the State office, present the State program of work and its application to that county.
3. Elect from this county group a county corn-borer committee, which, with the county agent and help from the State office, will plan a definite and detailed program of work for the county.

INFORMATIONAL

The committee on informational work reported in part as follows:

"It is the opinion of the committee that the object of the informational work for the spring of 1928 continue to be the dissemination of information to farmers and the public generally regarding the importance of corn-borer control and its attendant need for a thorough farm clean-up.

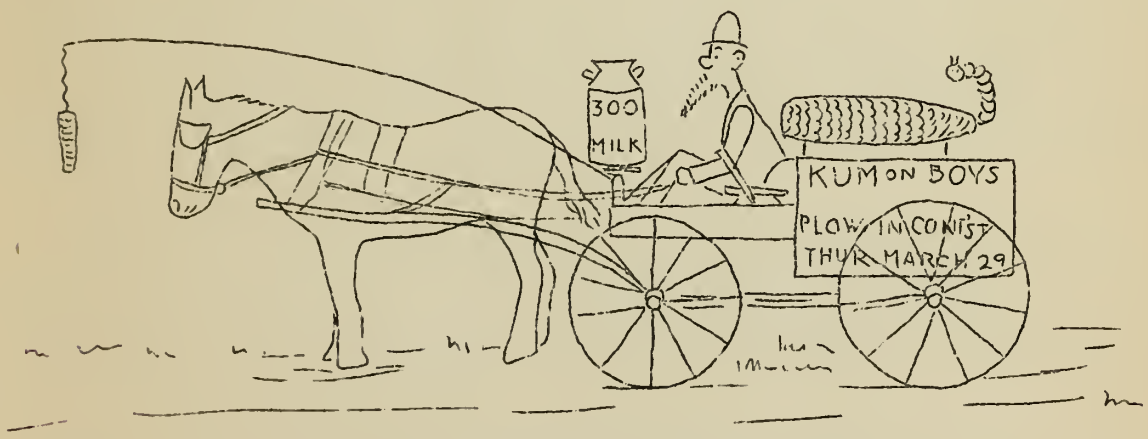
"The most important type of informational activity continues to be the release of news regarding effective control methods put into practice by individual farmers. It is felt also that the public should be given ample information concerning scouting and road-patrol activities and the maintenance of quarantines, including the objects, the selection and training of personnel, and the results obtained.

"Regulatory information must for the spring of 1928 of necessity be handled separately in each State and will be dependent on the regulations issued in the State. General regulatory and research activities should continue to receive adequate news support.

"The continuance of appointments of emergency information workers until July 1, 1928, is recommended. They should continue to handle corn-borer educational information impartially irrespective of whether it emanates from the State department of agriculture, the Federal administrator of the corn-borer act in the State, or the State agricultural college. Close contact of the emergency information workers with the county extension agents and local newspapers, the dissemination of information on a national and sectional basis by the U. S. Department of Agriculture, and the utilization of the press and the radio supplemented by publications, educational posters, and the picture mat and cut service are recommended."

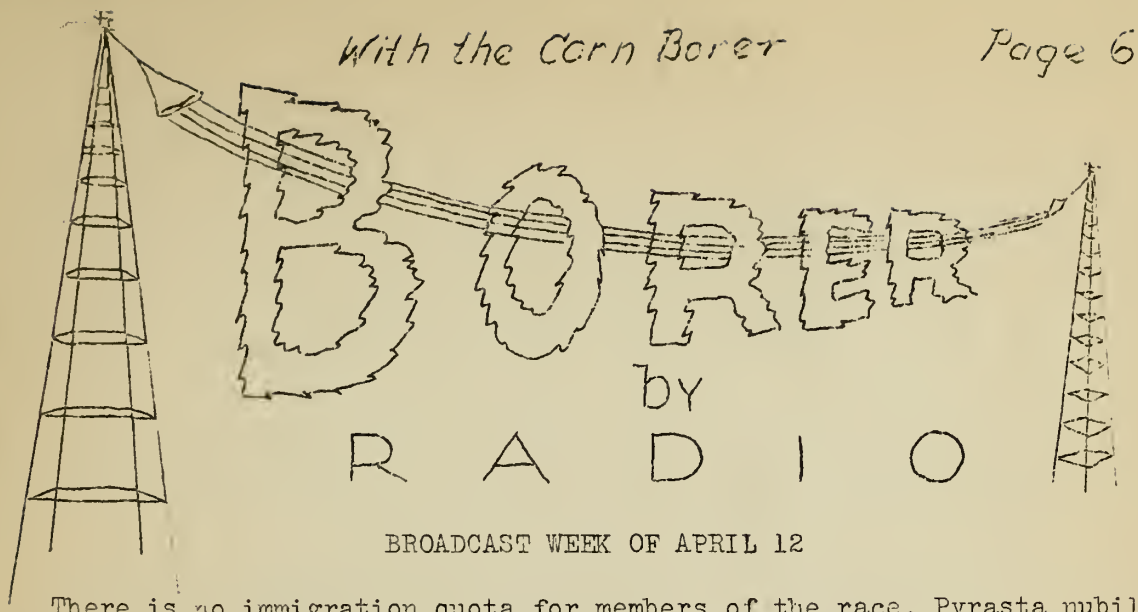
AMONG THOSE PRESENT

From Indiana, G. I. Christie, director of extension; L.E.Hoffman, extension leader in corn-borer work; T. R. Johnston, in charge informational service; from Ohio, T. H. Parks, in charge corn-borer educational work; D. S. Myer, extension district supervisor; J. R. Fleming, assistant editor; from Michigan, R. J. Baldwin, director of extension work; H. C. Rather, in charge corn-borer educational work; and E. R. Proulx, in charge corn-borer information; from Pennsylvania, H. E. Hodgkiss, professor of entomological extension; from New York, L. R. Simons, in charge corn-borer educational work; R. H. Wheeler, professor in extension service; and Bristow Adams, editor, New York State College of Agriculture; from the U. S. Department of Agriculture, C. W. Warburton, director of extension work; C. B.Smith, chief, Office of Cooperative Extension Work; Reuben Brigham, in charge corn-borer informational work; G. E. Farrell, in charge corn-borer educational work; C. L. Marlatt, chief, Bureau of Entomology; W. H. Larrimer, in charge, corn-borer control work; Rodger R. Kauffman, executive assistant, European corn borer control; L. A. Schlup, assistant corn-borer informational work;and of the Cooperative Extension Work, T. Weed Harvey, assistant to chief; O. S. Fisher, extension agronomist; Florence E. Ward, in charge Eastern States; H. W. Hochbaum field agent, Eastern States; R. A Turner, field agent, Central States.



Advertising the Plowing Contest in Ohio

To bring to the attention of the farmers the plowing contest planned to arouse interest in good plowing for corn-borer control, a prominent farmer in the county dressed up in whiskers and old clothes and went abroad through the county in the above rig. On the back of the old wagon he had a large artificial ear of corn and coming out of it a monstrous corn borer concocted of an old inner tube. The old mule was kept going by an ear of corn on a fishing pole.



BROADCAST WEEK OF APRIL 12

There is no immigration quota for members of the race, Pyrasta nubilalis. And descendants of members of this tribe which have reached this country from the Old World are confined as closely as possible to the regions where they have established residence.

Which is to say that the European corn borer (scientific name, Pyrasta nubilalis) is barred from entry into this country in shipments of plants or plant products, and from travel out of infested areas within the country in similar shipments.

There are two Federal Quarantines against the corn borer now in force--a foreign and a domestic. The foreign quarantine prohibiting the entrance of any plant products likely to contain the pest has been strictly enforced at all points of entry since 1921 by the Federal Horticultural Board. Since 1920 the domestic quarantine has been in force. It prevents the movement of all infested material into "clean" territory, and is enforced by the Bureau of Entomology in cooperation with the Federal Horticultural Board and the various States affected. Many of the States have their own quarantine regulations, in addition.

The products under quarantine vary in different parts of the country. In the Great Lakes region they are all parts of the corn plant, broomcorn, sorghums, and Sudan grass. This quarantine applies the year around. None of these products can be moved out of the infested area, or reshipped, even if grown outside the area, unless a certificate of inspection is obtained from the quarantine authorities.

An additional quarantine, effective between the dates of June 1 and December 31 each year, is laid in eastern Massachusetts, New Hampshire, Maine, Rhode Island, Connecticut, and Fishers Island, N.Y., on the following: Celery, green beans in the pod, beets with tops, rhubarb, oat and rye straw as such or when used as packing, cut flowers and entire plants of chrysanthemum, aster, cosmos, zinnia, hollyhock, gladiolus, and dahlia.

The question of course comes up at once.How effective has the quarantine been in preventing spread of the corn borer.

The borer fighters reply that, because of the quarantine restrictions, long-distance spread by artificial means has been practically eliminated. In several cases badly infested green corn, bound for Iowa and other parts of the Corn Belt, and even for Florida, has been intercepted. No serious infestation of corn borers has been found in any area isolated from the main infested regions. Of course quarantine has no effect on the natural spread of the borers by flight of the moths, winds carrying moths or infested pieces of the corn plant, and streams bearing infested stalks downstream on flood waters.

Now for a look around at the spring work which remains to be done to complete the clean-up and kill corn borers before they emerge from last year's stalks and cobs to fly as moths and lay the eggs which will produce the 1928 crop of pests.

A question which is frequently asked is whether or not living corn borers are found in shelled corn or in ear corn stored in cribs.

The borers overwinter in corn cobs, not in the corn grain. Therefore shelled corn intended for shipment out of the infested area must be certified free of cobs and debris capable of carrying the corn borer in order to meet quarantine requirements.

The process of shelling does not ordinarily kill the borers contained in the cobs. Hence, all cobs about farms in the infested areas should be burned before June 1. Furthermore, all corn from infested fields should be shelled not later than June 1 so that the cobs may be burned. When it is impossible to shell the corn and burn the cobs before June 1, the ear corn should be placed in a tight container, or covered by a wire screen with at least 12 meshes to the inch, in order to prevent the escape of emerging moths.

Another source of possible reinfestation of this year's corn crop is cornstalks stored in barns. Some of the borers brought in from infested fields in such stalks may die as a result of the drying out of the stalks during the winter, but in order to keep the number of moths flying in June to a low enough number to prevent commercial damage to this year's crop, all the stalks should be taken out and burned, or finely cut or shredded before June 1. To kill borers by cutting, the cutter should be adjusted to cut the stalks into pieces not more than one-half inch long.

These two measures-- shelling infested ear corn and burning the cobs, and burning, shredding, or finely cutting infested stalks stored over winter, are important side-line activities of the clean-up. Of course the principle back of these and all other control measures is to get rid of all remnants of last year's corn crop which may contain the hibernating borer. The main operations that will accomplish this result are clean plowing which leaves no stubble or stalk fragments on the surface of the fields; ensiling, finely cutting, grinding, or shredding fodder, and feeding it to livestock; collecting fragments of stalks, leaves, and cobs about the fields, feed lots, and barnyards, and burning them; and, at harvest time in the fall, low cutting to leave a stubble less than 2 inches high.